

Patent #5,256,817). To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Sikkenga recites that at reaction temperatures preferably of about 600 F and above, the elimination of trimellitic anhydride from the impure naphthalendicarboxylic acid is most effective and the rates of the chemical reaction involved in the purification method are greatest. (See Sikkenga, column 7, lines 60-65). Furthermore, the experimental runs in Sikkenga only teach temperatures of 590 F and higher (see Sikkenga, Tables 1 and 2).

By contrast, the Applicant's invention recites that the purification process should be carried out at temperatures between about 520 and 575 F, and that such temperatures significantly lower the amounts of impurities such as 6-methyl-2-naphthoic acid and 2,6-dicarboxytetralin. The Applicant has recited the importance of such a temperature range in its specification and in Claim 1. The Applicant has recited that "the purification process should be carried out at temperatures between about 525 F and 570 F, preferably 525 and 560 F, and most preferably at 550 F" (see specification, page 4, lines 1-3). In addition, the Applicant's examples of the invention also recite the aforesaid range. By contrast, the runs in Sikkenga only recite reaction conditions over 590 F and higher.

Furthermore, the Applicant recites numerous advantages of a lower reaction temperature range. In addition to the reduction of impurities such as 6-methyl-2-naphthoic acid and 2,6-dicarboxytetralin, operating at such lower temperatures avoids extra capital costs for plants capable of withstanding the pressure resulting from operating at temperatures above 600 F. Also, operating at a lower temperature avoids the large investment in energy to heat reaction mixtures to purification temperatures above 600 F. Yet further, operating above 600 F may require additional purification of the monomer before they are useful in polymer applications.


The Examiner also stated that Partenheimer (US Patent # 5,081,290) supplements the Sikkenga reference regarding the use of tin belonging to the group IVB metal, and that there is a relationship between the two references, namely, that the oxidation process takes place in either of their processes by way of getting to the purification process. However, the use of the tin catalyst in Partenheimer is directed to the oxidation process. Combining the teachings of the tin catalyst from Partenheimer into Sikkenga would still be directed to the oxidation reaction. There is no teaching or suggestion that the tin catalyst would be used in association with contacting the selected naphthalenic carboxylic acid and the selected solvent in the presence of hydrogen, as is this case with the Applicant's invention. It is understood that both Partenheimer and Sikkenga go through an oxidation step in the purification process, but again, the use of tin in Partenheimer is for the oxidation reaction. The Applicant respectfully requests that the Examiner withdraw the rejection under 35 U.S.C. §103(a) that claims 1 through 20 are unpatentable over Sikkenga in view of Partenheimer.

The Applicant has also resubmitted the drawings to overcome the draftsperson's objections under 37 C.F.R. 1.84, namely, that the lines, numbers, and reference characters are not up to standards.

The Applicant respectfully requests that the Examiner consider the preceding arguments. The Applicant submits that Claims 1-20 are now in condition for allowance and respectfully requests allowance of these claims.

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